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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/711,001

08/17/2004

Lung-Wei Huang

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05/01/2007

SHINE YING CO., LTD.

2F-4, NO. 148, SEC. 4, CHUNG HSIAO EAST ROAD

TAIPEI,

TAIWAN

EXAMINER

DUONG, THO V

ART UNIT

PAPER NUMBER

3744

MAIL DATE

DELIVERY MODE

05/01/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/711,001

Applicant(s)

HUANG, LUNG-WEI

Examiner

Tho v. Duong

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 August 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed subject matter that “wherein said heat conducting member is an outer shell of said electronic device” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

Art Unit: 3744

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The claimed subject matter that “wherein said heat conducting member is an outer shell of said electronic device” is not described in the specification.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claimed subject matter that “wherein said heat conducting member is an outer shell of said electronic device” renders the scope of the claim indefinite since it is not understood how the heat conductive member (12) is an outer shell of the electronic device (3) as shown in figure 3.

Claim 7 is further rejected as can be best understood by the examiner in which the heat conductive member (12) is on the outside of the electronic device.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 and 12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Itoh (US 5,308,920). Itoh discloses (figures 3-8) a high performance two phase flow evaporator comprising an electronic device (1); a casing (22), a metal heat sink (33); a heat conducting member (21) and grooves (25) formed in the top surface of the member (21); the evaporator is made of aluminum with inherently has $K > 80 \text{ W/m.K}$; a working liquid such as alcohol is disclosed in the evaporator; a plurality of fins (31) upwardly extended from a top of the heat sink (33); a bottom surface of the heat sink has grooves (formed between protrusion (32)) facing the inside of the enclosed chamber. Regarding claim 12, it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138. In this case, the vertical ribs (23) are considered to read as steam guide means. The ribs (23) are capable of guiding steam to flow vertically between the ribs. Regarding claims 3-4, Itoh discloses that the heat conductive material is a thermal conductive material such as aluminum. Itoh is silent whether the heat conductive material can be another material such as metal alloy or plastic. However, applicant has not disclosed any criticality or any particular purpose for having the heat conductive member of a metal alloy or plastic. Moreover, it appears that the heat conductive member would perform equally well with aluminum or its alloy or plastic. Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use aluminum, its alloy or plastic, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a design consideration, which fails to patentably distinguish over the prior art of Itoh. In re Leshin, 125 USPQ 416.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Itoh in view of Bonsignore et al. (US 6,432,320). Itoh substantially discloses all of applicant's claimed invention as discussed above except for the limitation that metal and ceramic grains/powder is added to enclosed fluid. Bonsignore discloses (column 3, lines 20-27 and column 4, lines 5-20) that powder of metal and ceramic are added to a working fluid of a heat pipe for a purpose of enhancing the heat conductivity of the working fluid. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Bonsignore's teaching in Itoh's device for a purpose of enhancing the heat conductivity of the working fluid.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lin (US 6,466,442) discloses a steam guide for a cooling device.

Mochizuki et al. (US 5,694,295) discloses a heat pipe and heat sink.

Reyzin et al. (US 6,588,498) discloses a thermosiphon.

Paterson (US 5,529,115) discloses an integrated circuit cooling device.

Pravda (US 4,012,770) discloses cooling a heat producing electronic component.

Ghosh et al. (US 6,840,311) discloses a compact thermosiphon.

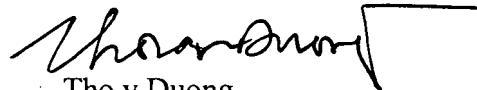
Searls et al. (US 6,550,531) discloses a vapor chamber.

Art Unit: 3744

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho v. Duong whose telephone number is 571-272-4793. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tyler J. Cheryl can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Tho v Duong
Primary Examiner
Art Unit 3744



TD
April 19, 2007